

ABSTRACT

The present invention relates to an electrode metal material for batteries, capacitors, etc, used in contact with non-aqueous electrolyte, and particularly to a capacitor formed of the electrode metal material, and provides a valve metal material capable of decreasing the internal resistance of the capacitor. The electrode metal material comprises a valve metal material and numerous carbon particles included in the surface of the valve metal material. The carbon particles are further fixed in the surface of the valve metal material so as to expose to the surface. The electrode metal material is coated with an activated carbon layer and used as a double-layer electrode for an electric double-layer capacitor. The carbon particles included in the surface ensure conduction between the activated carbon layer and the valve metal material. With this configuration, even if the surface of the valve metal material is oxidized, the internal resistance of the electrode is not decreased, the internal resistance of the capacitor is decreased, and the capacitance of the capacitor is increased.